Abstract

Artificial Neural Network (ANN) based model has been proposed for diagnosis of process mean shift. These are mainly generalized-based where only a single classifier was applied in the diagnosis of abnormal pattern. In this paper, we analyze the performance of a combined recognizer consisting of small-sized artificial neural networks on varying number of nodes in the hidden layer trained with Levenberg Marquardt and Quasi-Newton Algorithm. The results of our study illustrate the effectiveness of the combined recognizer and showed that combined recognizer performed better when number of hidden nodes is small, say, less than 15 in terms of recognition accuracies and mean square error as compared to the single recognizer.

References

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Pattern Recognition of Process Mean Shift using Combined ANN Recognizer

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Index Terms
Keywords

Bivariate Statistical Process Control  Combined ANN Recognizer  Pattern Recognition  Recognition Accuracy  Mean Square Error